

REMARKS

In view of the remarks put forth below, the Examiner is requested to withdraw the rejections and allow Claims 1, 3-8, 10, 11, 13, 14, 16-20, 38 and 39, as well as newly presented Claims 41 to 56, the only claims pending and under examination in this application.

Newly presented Claims 41 to 56 find support in the previously pending claims and application as originally filed.

Applicant notes that Claim 17 is not rejected by the Examiner. Since Claim 17 is not cited in the rejections below, it is assumed that Claim 17 is allowed.

Claim Rejection under 35 U.S.C. §103, Harmon and Kloppling in view of Beaty as explained by Bath

Claims 1, 3-8, 10, 11, 13, 14, 16, 18-20, 38 and 39 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Harmon (U.S. Patent No. 3,558,787) and Kloppling (U.S. Patent No. 3,789,122) in view of Beaty (U.S. Patent No. 5,634,959), as explained by evidence of Bath (U.S. Patent No. 6,083,293).

In order to meet its burden in establishing a rejection under 35 U.S.C. §103, the Office must first demonstrate that a prior art reference, or references when combined, teach or suggest all claim elements. *See e.g., KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740 (2007); *Pharmastern Therapeutics v. Viacell et al.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); MPEP § 2143(A)(1). In addition to demonstrating that all the elements were known in the prior art, the Office must also articulate a reason for combining the elements. *See e.g., KSR*, 127 S.Ct. at 1741; *Omegaflex, Inc. v. Parker-Hannifin Corp.*, 243 Fed. Appx. 592, 595-596 (Fed. Cir. 2007) (citing *KSR*). Further, the Supreme Court in *KSR* also stated that that “a court *must* ask whether the improvement is more than the predictable use of prior art elements according to their established functions.” *KSR*, 127 S.Ct. at 1740 (emphasis added). As such, in addition to showing that all elements

of a claim were known in the prior art and that one of ordinary skill in the art had a reason to combine them, the Office must also provide evidence that the combination would be a predicted success.

In the previous response filed April 20, 2009, Applicant argued that the claimed compositions are more than the predictable use of prior art elements and pointed to a discussion of the unexpected reduction of pesticide-induced phytotoxicity observed with compositions of the present invention (specification at page 6, ¶ [0018]), and to supporting objective evidence in the Experimental section.

In maintaining this rejection over the Applicant's prior arguments of unexpected results, the Examiner reasons that:

"the Applicant's arguments, filed 4/20/09 ... would be persuasive to the extent the claims reflect the argued for effects as supported by the examples. However, the claims DO NOT reflect the effects presented, & as argued, are beyond the scope of the specification." Office Action, page 8, lines 9-13.

In maintaining this rejection, it appears that the Examiner has maintained this rejection in part on faulty reasoning that the present claims do not reflect the results and conclusions supported by the examples. However, Claim 1 specifically says that the "synthetic pesticide component" be "phytotoxicity-inducing" and that the "composition reduces pesticide-induced phytotoxicity of a plant." The Applicant maintains that the claimed compositions are more than the predictable use of prior art elements according to their established functions, as will be further demonstrated below.

Objective evidence of an unexpected reduction in pesticide-induced phytotoxicity, is supported in the Experimental section and discussed in the specification (page 6, ¶ [0018]). The Experimental section (pages 35-41) presents the results of several experiments comparing the overall vigor and appearance of plants after treatment with:

- i) pesticide only,

- ii) pesticide + Green Thumb,
- iii) Green Thumb only,
- iv) untreated.

Comparison of the overall vigor and appearance (scale 0-10, 4 replicates each), of plants of treatment i) versus iv), compared to treatment ii) versus iii), in each experiment, gives the relative pesticide-induced phytotoxicity with and without the Green Thumb components. An analysis of the data (see table below), specifically shows a negative change in overall vigor and appearance for plants treated with only pesticides, relative to control plants, i.e., a pesticide-induced phytotoxic effect. The pesticide-induced phytotoxicity was reduced by 78 to 100% by the addition of the components of Green Thumb fertilizer to the compositions, in experiments IIA - IID.

Expt	II A (page 36)		II B (page 37)		II C (page 39)		II D (page 40)	
pesticide	KYROCIDE		KOCIDE		BRAVO WS		ORBIT	
Green Thumb	-	+	-	+	-	+	-	+
change in appearance	-2.75	0	-3	-0.25	-3.75	-0.25	-4.5	-1
% reduct. in phytotox.	100%		92%		93%		78%	

As reviewed above, Claim 1 recites that the “composition reduces pesticide-induced phytotoxicity of a plant.” This element is directly supported by the unexpected results of the objective data presented in experiments IIA - IID. Thus, contrary to the Examiner’s reasoning, the present claims DO reflect the effects supported by the examples, as argued persuasively in the Applicant’s response of 4/20/09.

As such, Applicant contends that sufficient objective evidence has been presented to demonstrate that the claimed compositions are more than merely the predictable use of prior art elements according to their established functions. Accordingly, the Applicant submits that the claimed compositions are not obvious over the references cited by the Examiner, and respectfully request that this rejection be withdrawn.

Additionally, the Applicant contends that a *prima facie* case of obviousness has

not been established because there is no apparent reason to combine the claimed elements in the manner suggested by the Examiner.

In *KSR*, the Supreme Court made clear that, "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. . . . it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR*, 127 S. Ct. at 1741. An invention is not obvious under 35 U.S.C. §103, "where the prior art [gives] either no indication of which parameters [are] critical or no direction as to which of many possible choices is likely to be successful." *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 10 USPQ2D (BNA) 1843 (Fed. Cir. 1989), quoting *In re O'Farrell*, 7 USPQ2D (BNA) 1673 (Fed. Cir. 1988)." [R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 127 S. Ct. at 1740-1741, quoting *In re Kahn*, 441 F.3d at 988.

Claim 1 recites:

"A pesticide composition comprising:

- (a) a phytotoxicity-inducing synthetic pesticide;
- (b) an assimilable carbon-skeleton energy component;
- (c) a water soluble macronutrient;
- (d) a water soluble micronutrient; and
- (e) a vitamin/cofactor component,

wherein said composition reduces pesticide-induced phytotoxicity of a plant."

As such, five specific components are required to produce a claimed composition that reduces pesticide-induced phytotoxicity of a plant.

In making this rejection, the Examiner cites Harmon and Kloppling for providing compositions containing pesticides with nutrients and fertilizers (Office Action, page 2,

lines 14-15). For specific fertilizer components, the Examiner cites Beaty for disclosing that fertilizers and nutrients are useful to apply to plants; as explained by Bath which discloses the components of a fertilizer (Office Action, page 3, lines 14-17). As a suggested reason to modify Harmon and Klopping with Beaty, as explained by Bath, the Examiner asserts that:

“One would also be motivated to add fertilizer because both Harmon & Klopping so instruct, and Beaty shows what constitutes fertilizer for plant application, further specified as to the breakdown of components shown by Bath....It would be obvious to vary the form of each ingredient to optimize the effect desired, depending upon the particular species and application method of interest, reduction of toxicity, cost minimization & enhanced plant growth effects.” (Office Action, page 4, lines 7-16).

Applicant respectfully submits that it would not be obvious to select the 5 specific claimed elements, based on the teachings of the cited references. The Examiner’s mere statement that “it would have been obvious to vary the form of each ingredient to optimize the effect desired” is insufficient to support a prima facie case of obviousness. Although the cited references disclose a long list of fertilizer ingredients the Examiner has provided no valid reasoning why one of ordinary skill in the art would have selected the claimed elements (a)-(e) from the many possible choices of ingredients.

Harmon and Klopping both only make general mention of fertilizers, and fail to provide any specific teachings, instruction or guidance with respect to the selection of fertilizer components from a list of ingredients, and their use in pesticidal compositions.

Harmon only makes general mention that “(c)ompositions of this invention can additionally contain known insecticides, fungicides, acaricides, nematocides, fertilizers and nutrients such as the following:” (column 4, lines 50-53). In fact, the long list of subsequent examples that Harmon gives in support of this statement (column 4, line 54 to column 6, line 32) contains no specific examples of fertilizers, nutrients, or components thereof.

Similarly, Klopping makes only general mention that "compositions can contain, in addition to the active ingredient of this invention, conventional insecticides, miticides, bactericides, nematocides, fungicides, or other agricultural chemicals such as fruit-set agents, fruit-thinning compounds, fertilizer ingredients and the like" (column 29, lines 41-45). Similarly, the long list of examples that Klopping gives in support of this statement (column 29, line 54 to column 31, line 41) contains no specific examples of fertilizers, nutrients, or components thereof.

As such, Harmon's and Klopping's general mention of fertilizers provides no specific instruction or guidance to make particular selections of components for pesticidal compositions, no understanding of which components would be useful, or what the desired properties of the compositions would be. Harmon and Klopping are both silent with respect to pesticide-induced phytotoxicity or reduction thereof, as required by the present claims. Harmon and Klopping give no indication of which parameters are critical and no direction as to which of many possible choices is likely to be successful from a list of ingredients.

The Examiner cites Beaty and Bath solely for their teachings of fertilizers and a breakdown of the components of a seaweed extract. Beaty and Bath are silent with respect to pesticides and phytotoxicity-reducing pesticidal compositions. Beaty is directed towards a fertilizer mixture of largely natural ingredients including seaweed extract and fish solubles. Bath provides a breakdown of the components of a seaweed extract that includes over 70 individual components (column 6, table). Although Beaty and Bath provide a long list of ingredients for fertilizers, they provide no specific instruction or guidance to make particular selections of specific components from the list, no understanding of which components would be useful for pesticidal compositions, or what the desired properties of the compositions would be.

As such, Beaty and Bath make no indication of which parameters are critical and no direction as to which of many possible choices is likely to be successful. The

Examiner has provided no valid reasoning why one of ordinary skill in the art would have selected the claimed elements (a)-(e) from the many possible choices of ingredients.

Since the cited references provide no indication of which parameters are critical and no direction as to which of many possible choices is likely to be successful, it would not be obvious to one of ordinary skill in the art to select the five claimed elements (a)-(e), as suggested by the Examiner.

Thus, absent an articulated reason with some rational underpinning, there is no apparent reason to combine the elements in the manner suggested by the Examiner. As such, a prima facie case of obviousness has not been established. Accordingly, the Examiner is respectfully requested to withdraw this rejection of Claims 1, 3-8, 10, 11, 13, 14, 16, 18-20, 38 and 39.

Claim Rejection under 35 U.S.C. §103, Harmon or Klopping in view of Bath

Claims 1, 3-8, 10, 11, 13, 14, 16, 18-20, 38 and 39 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Harmon (U.S. Patent No. 3,558,787) or Klopping (U.S. Patent No. 3,789,122) in view of Bath (U.S. Patent No. 6,083,293).

The arguments presented in the rejection above with respect to objective evidence of unexpected results, and the cited references Harmon, Klopping and Bath may also be applied to this rejection.

As reviewed above, Applicant contends that sufficient objective evidence has been presented to demonstrate that the claimed compositions are more than merely the predictable use of prior art elements according to their established functions. The claimed element of reduction in pesticide-induced phytotoxicity of a plant is directly

supported by the unexpected results of the objective data presented in the examples. Accordingly, the Applicant submits that the claimed compositions are not obvious over the references cited by the Examiner, and respectfully requests that this rejection be withdrawn.

In addition, the Applicant contends that a *prima facie* case of obviousness has not been established because there is no apparent reason to combine the claimed elements in the manner suggested by the Examiner.

As discussed above, Harmon's and Klopping's general mention of fertilizers provides no specific instruction or guidance to make particular selections of components for pesticidal compositions from a long list of ingredients, and no understanding of which components would be useful, or what the desired properties of the fertilizers would be.

Bath merely provides a breakdown of the components of a seaweed extract for fertilizer that includes over 70 individual components (column 6, table). As such, although Bath provides a long list of fertilizer ingredients, it provides no specific instruction or guidance to make particular selections of the components from the list, no understanding of which components would be useful in pesticidal compositions, or what the desired properties of the compositions would be.

Since the cited references provide no indication of which parameters are critical and no direction as to which of many possible choices is likely to be successful, it would not be obvious to one of ordinary skill in the art to combine the five claimed elements (a)-(e), as suggested by the Examiner.

Thus, absent an articulated reason with some rational underpinning, there is no apparent reason to combine the elements in the manner suggested by the Examiner. As such, a *prima facie* case of obviousness has not been established. Accordingly, the Examiner is respectfully requested to withdraw this rejection of Claims 1, 3-8, 10, 11,

13, 14, 16, 18-20, 38 and 39.

Finally, newly presented Claims 41 to 56 are patentable at least for the reasons provided above.

CONCLUSION

The Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number YAMA-009.

Respectfully submitted,
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